Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_ Per.: \_\_\_\_\_\_\_\_

**Unit 2: Transformations Study Guide**

* How is a transformation a function?
* What is a rigid motion? Why are rotations, reflections, and translations rigid motions?
  + rotation
    - on the coordinate plane (90, 180, 270 degrees)
    - off the coordinate plane (construction to find the center of rotation)
  + reflection
    - on the coordinate plane
    - off the coordinate plane (construction to find the line of symmetry)
  + translation
    - on the coordinate plane
  + Identify a rigid motion and write a rule given a pre-image and image.
* Perpendicular Bisectors
  + Why are they important in some transformation constructions?
  + How do perpendicular bisectors relate to equal distances in reflections and rotations?
* Symmetry
  + rotational symmetry
    - When does a figure have rotational symmetry?
    - What is the order of rotation?
    - What is the angle of rotation?
  + reflectional symmetry
    - When does a figure have reflectional symmetry?
    - Where is (are) the line(s) of symmetry?
* Congruence
  + How can you define congruence in terms of rigid motion?
  + How can you prove to figures are or are not congruent using rigid motion?